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1974 REPORT OF ALFALFA NURSERIES
EASTERN FORAGE IMPROVEMENT CONFERENCE

Part II. Eastern Canada

Conducted Cooperatively by the Various
State Agricultural Experiment Stations
and
The Agricultural Research Service
United States Department of Agriculture
in the Eastern United States
and
Including Data from Eastern Canada

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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service
Northeastern Region, North Atlantic Area

CONTENTS

	Page
INTRODUCTION	1
VIRGINIA, G. R. Buss	
Variety trials	2
WEST VIRGINIA, J. A. Balasko	
Variety trials	10
MARYLAND, BELTSVILLE, J. H. Elgin, Jr., R. H. Ratcliffe, and J. E. McMurtrey III	
Performance of anthracnose resistant populations	11
NEW YORK (including cooperative data from other Northeastern States) C. C. Lowe	
Variety trials	14
NEW YORK, GENEVA, D. D. Dolan and S. W. Braverman	
Alfalfa introductions	43
PART II	
ONTARIO, Ontario Forage Crops Committee	
Variety trials	44
QUEBEC, Quebec Forage Crops Committee	
Variety trials	56
ATLANTIC PROVINCES, Atlantic Provinces Forage Crops Committee	
Variety trials, 1973 Data	69
Variety trials, 1974 Data	77

Ontario Alfalfa Trials

Cultivars under test and test locations:

- 1972 seedings:
- a. Early cultivars: Saranac, Angus, Thor, Anchor, EA91, WL309, BW9, Americana
 - b. Medium cultivars: Vernal, Iroquois, Weevlcheck, Titan, WL202, WL210, Algonquin, WL215, EA21, Klondike, N7-5.
 - c. Test locations: Ridgetown, Guelph, Ottawa, New Liskeard, Kapuskasing, Thunder Bay.
- 1973 seedings:
- a. Early Cultivars: Saranac, Angus, Thor, Anchor, EA91, RP103(Citation), Nuggett
 - b. Medium cultivars: Vernal, Iroquois, Weevlcheck, Tital WL202, WL210, Algonquin, 520, WL215, N7-5, Aztec, Valor, Kodiak.
 - c. Test locations: Ridgetown, New Liskeard, Ottawa (winter-killed 1973/74)
- 1974 seedings:
- a. Early cultivars: Saranac, Angus, Thor, Anchor, RP103 (Citation), Nuggett, 530, WL311, Maris Phoenix, 131, K1-7, K1-10, CW5, Pacer, Saranac AR, Honeoye.
 - b. Medium cultivars: Vernal, Iroquois, Weevlcheck, Titan WL202, WL210, 520, Algonquin, Aztec, Valor, Kodiak, Klondike, Polar 1, K3-11, Agate, Ramsey, WL318 (originally entered as WL218).
 - c. Test locations: Guelph, Kemptville, Thunder Bay, Ottawa.

Standard Alfalfa Tests

1972 seedings, 1974 yields, 2-year means (kg/ha)

Ridgetown (1026)

	Cut 1	Cut 2	Cut 3	Total 1974	2-year mean
Algonquin	5858	3803	3353	13014	11276
EA21	5738	3971	3267	12976	11190
Klondike	5820	4051	3143	13014	11219
N7-5	6049	3703	3108	12860	11200
Iroquois	5715	4004	3267	12986	11229
Vernal	5818	3833	3012	12663	11074
Weevlcheck	5731	3937	3138	12806	11394
WL215	5654	3986	3102	12742	11209
Titan	5905	3939	3065	12909	11098
WL202	5845	3951	3016	12812	11065
WL210	5828	3867	3103	12798	11245
L.S.D. (5%)	482	407	415	816	
C.V.	5.75	7.20%	9.15%	4.39%	
F	N.S.	N.S.	N.S.	N.S.	

Guelph (2541)

Algonquin	3406	1682	-	5088	6059
EA21	3399	1518	-	4917	6106
Klondike	3442	1614	-	5056	6207
N7-5	3485	1460	-	4945	5912
Iroquois	3352	1643	-	4995	6194
Vernal	3324	1244	-	4568	5606
Weevlcheck	3483	1310	-	4793	5866
WL215	3430	1422	-	4852	5805
Titan	3384	1224	-	4608	5741
WL202	3529	1378	-	4907	5797
WL210	3388	1530	-	4918	5911
L.S.D. (5%)	279	329		448	
C.V.	5.65%	15.65		6.36%	
F.	N.S.	N.S.		N.S.	

New Liskeard (8004)

	Cut 1	Cut 2	Total 1974	2-year mean
Algonquin	4492	584	5076	5963
EA21	5251	561	5812	6417
Klondike	4271	666	4937	5757
N7-5	4155	600	4755	5470
Iroquois	4679	744	5423	6062
Vernal	4766	557	5323	6012
Weevilcheck	3900	581	4481	5132
WL215	4605	608	5213	5797
Titan	4471	556	5027	5734
WL202	4992	557	5548	5906
WL210	4217	637	4854	5371
L.S.D. (5%)	1081	155	1022	
C.V.	16.54%	17.72%	13.79%	
F	N.S.	N.S.	N.S.	

Kapuskasing (6456)

Algonquin	2834	1403	4237	5009
EA21	3224	1526	4750	5321
Klondike	2882	1301	4183	5557
N7-5	4526	1582	6108	6339
Iroquois	4133	1627	5760	6663
Vernal	2760	1515	4275	4927
Weevilcheck	4075	1659	5734	6275
WL215	1760	1173	2933	4458
Titan	2670	1571	4241	4683
WL202	3796	1567	5313	5625
WL210	3483	1549	5032	5543
L.S.D. (5%)	1538	337	1788	
C.V.	32.41%	15.62%	25.92%	
F	*	N.S.	*	

Thunder Bay (7065)

	Cut 1	Cut 2	Total 1974	2-year mean
Algonquin	2256	985	3241	4710
EA21	1852	492	2344	4240
Klondike	2150	769	2919	4638
N7-5	2397	376	2773	4224
Iroquois	2271	968	3239	4785
Vernal	2090	505	2595	4193
Weevlcheck	2525	472	2997	4346
WL215	2195	564	2759	4429
Titan	2262	405	2667	4108
WL202	1978	503	2481	4127
WL210	2020	381	2401	3991
L.S.D. (5%)	304	196	403	
C.V.	12.01%	28.90%	12.54%	
F	**	**	**	

Summary, Standard Alfalfa, 1972 Seeding

	Ridgetown (1026)	Guelph (2541)	Ottawa 1973	New Liskeard (8004)	Kapuskasing (6456)	Thunder Bay (7065)
	2-yr.mean	2-yr.mean		2-yr. mean	2-yr. mean	2-yr. mean
Algonquin	11276	6059	8155	5963	5009	4710
EA21	11190	6106	6799	6417	5321	4240
Klondike	11219	6207	7526	5757	5557	4638
N7-5	11200	5912	7160	5470	6339	4224
Iroquois	11229	6194	8017	6062	6663	4785
Vernal	11074	5606	7171	6012	4927	4193
Weevlcheck	11394	5866	7124	5132	6275	4346
WL215	11209	5805	7252	5797	4458	4429
Titan	11098	5741	6468	5734	4683	4108
WL202	11065	5797	7390	5906	5625	4127
WL210	11245	5911	7636	5371	5543	3991

	Mean yield for southern stations (5 station yrs.)	Mean yield for northern stations with 1974 Kap. without 1974 Kap.* data(6 stn.yrs.) data (5 stn.yrs.)		Provincial Means 11 station 10 station* years years	
Algonquin	8565	5227	5425	6896	6995
EA21	8278	5326	5441	6802	6860
Klondike	8475	5317	5544	6896	7010
N7-5	8277	5344	5191	6811	6734
Iroquois	8573	5836	5852	7205	7213
Vernal	8106	5044	5198	6575	6652
Weevlcheck	8329	5251	5154	6790	6742
WL215	8256	4894	5287	6575	6772
Titan	8029	4842	4962	6436	6496
WL202	8223	5219	5200	6721	6712
WL210	8389	4968	4956	6679	6673

* These means do not include the 1974 Kapuskasing data due to high C.V. values.

Early Alfalfa Tests

1972 seedings, 1974 yields, 2-year means (kg/ha)

Ridgetown (1025)

	Cut 1	Cut 2	Cut 3	Total 1974	2-year mean
Saranac	5709	4030	3388	13127	11393
Anchor	5646	4120	3123	12889	11260
Thor	5907	4163	3179	13249	11885
BW9	5550	3988	3439	12977	11565
Angus	6314	3810	2955	13079	11769
WL309	5389	4268	3343	13000	11454
EA91	5508	3897	3120	12525	11499
Americana	5545	3911	3120	12576	10826
L.S.D. (5%)	504	271	212	666	
C.V.	6.02	4.58%	4.49%	3.50%	
F	**	**	**	N.S.	

Guelph (2540)

	Cut 1	Cut 2	Cut 3	Total 1974	2-year mean
Saranac	3370	1439	-	4809	6243
Anchor	3571	1619	-	5190	6155
Thor	3578	1506	-	5084	6301
BW9	3157	1561	-	4718	6123
Angus	3265	1550	-	4815	6262
WL309	3155	1238	-	4393	5657
EA91	3578	1465	-	5043	6094
Americana	3401	1269	-	4670	5836
L.S.D. (5%)	365	229		449	
C.V.	8.32	12.16%		7.16%	
F	N.S.	**		**	

New Liskeard (8004)

	Cut 1	Cut 2	Total 1974	2-year mean
Saranac	3980	214	4194	5101
Anchor	4330	216	4546	5396
Thor	3814	208	4022	5380
BW9	4592	198	4790	5399
Angus	4686	191	4877	5534
WL309	4796	222	5018	5494
EA91	4112	216	4328	5056
Americana	4097	204	4301	5180
L.S.D. (5%)	1045	29	1042	
C.V.	16.5%	9.52%	15.71%	
F.	N.S.	N.S.	N.S.	

Kapuskasing (6480)

Saranac	2640	1474	4114	5033
Anchor	3248	1854	5102	5602
Thor	2004	1449	3453	4657
BW9	3023	1610	4633	5298
Angus	2421	1304	3725	5138
WL309	1967	1269	3236	4449
EA91	1772	1303	3075	4645
Americana	2654	1366	4020	4809
L.S.D. (5%)	1167	409	1530	
C.V.	32.18%	19.15%	26.54%	
F.	N.S.	N.S.	N.S.	

Thunder Bay 7057)

Saranac	2295	686	2981	3824
Anchor	2207	749	2956	4054
Thor	2267	742	3009	4006
BW9	2470	758	3228	3985
Angus	2465	714	3179	3984
WL309	2397	630	3027	3760
EA91	2263	594	2857	3573
Americana	2323	692	3015	3822
L.S.D. (5%)	172	154	245	
C.V.	6.27%	18.85%	6.90%	
F	*	N.S.	N.S.	

Summary Early Alfalfa, 1972 Seedings

	Ridgetown(1025) 2-year mean	Guelph(2540) 2-year mean	Ottawa 1973	New Liskeard 2-year mean	Kapuskasing 2-year mean	Thunder Bay 2-year mean
Saranac	11393	6243	7059	5101	5033	3824
Anchor	11260	6155	7548	5396	5602	4054
Thor	11885	6301	8552	5380	4657	4006
BW9	11565	6123	6874	5399	5298	3985
Angus	11769	6262	7574	5534	5138	3984
WL309	11454	5657	7222	5494	4449	3760
EA91	11499	6094	7024	5056	4645	4573
Americana	10826	5836	6968	5180	4809	3822

	Mean yield for southern station (5 station yrs.)	Mean yield for northern stations (6 statn. yrs.)	(5 statn yrs.)*	Provincial Mean (11 statn.yrs.)	(10 statn. yrs.)*
Saranac	8466	4652	4700	6386	6583
Anchor	8476	5017	5000	6589	6738
Thor	8985	4681	4926	6637	6955
BW9	8448	4894	4946	6509	6697
Angus	8754	4885	5117	6644	6936
WL309	8232	4567	4854	6233	6543
EA91	8442	4425	4694	6250	6568
Americana	8058	4604	4720	6174	6389

*These means do not include Kapuskasing data due to high C.V. values.

1973 Alfalfa Trials

Ridgetown

Early varieties (1031)

	Cut 1	Cut 2	Cut 3	Total 1974
Saranac	5418	3878	2720	12016
Anchor	5048	3732	2771	11551
Thor	5567	4026	2758	12351
Angus	5293	3602	2767	11661
EA91	5411	3838	2806	12055
Nuggett	5284	3651	2440	11375
Citation (RP103)	5629	3259	2757	11645
LSD(5%)	647	662	352	927
C.V.	8.10%	12.00%	8.73%	5.29%
F	N.S.	N.S.	N.S.	N.S.

Standard Varieties (1030)

Algonquin	5735	3585	2908	12228
EA-21	5612	3762	2811	12185
N7-5	5838	3418	2795	12051
Aztec	5378	3779	2895	12052
Kodiak	6169	3714	2970	12853
Valor	5858	3745	2932	12535
Iroquois	5327	3774	2861	11962
Vernal	5675	3530	2477	11682
Weevilcheck	5889	3834	2817	12540
520	5704	3740	2861	12305
WL-215	5462	3559	2585	11606
Titan	5735	3568	2616	11919
WL-202	5856	3729	2751	12336
WL-210	5912	3799	2928	12639
LSD(5%)	466	206	421	771
C.V.	5.70%	3.91%	10.52%	4.42%
F	N.S.	**	N.S.	N.S.

New Liskeard (8005)

Early Varieties

	Cut 1	Cut 2	Total 1974
Saranac	5331	2713	8044
Anchor	5020	2588	7608
Thor	4368	2691	7059
Angus	4871	2356	7227
EA 91	5199	2437	7636
Nuggett	4372	2334	6706
Citation (RP103)	4727	2425	7152

Standard Varieties

Algonquin	4178	2387	6565
EA 21	5488	2476	7964
N7-5	5096	2437	7533
Aztec	4278	2432	6710
Kodiac	4731	2363	7094
Valor	5380	2435	7815
Iroquois	5180	2623	7803
Vernal	4371	2547	6918
Weevilcheck	4521	2374	6895
520	4990	2381	7371
WL-215	5563	2315	7878
Titan	4288	2348	6636
WL-202	4454	2173	6626
WL-210	4752	2104	6856
LSD(5%)	1470	260	1507
C.V.	21.57%	7.58%	14.72%
F	N.S.	**	N.S.

1974 Test of Alfalfa Cultivars for Resistance to Bacterial Wilt

The test included 30 entries representing licensed cultivars and experimental strains. Each entry was replicated five times (5 pots) with 15 plants per replicate. In some cases delayed germination led to somewhat more than 75 plants for the 5 replicates.

Cormacks procedure of inoculation and rating was used with the exception that dead plants were not included in the evaluation. The reason for this is the fact that at the time of rating it is not possible to determine whether bacterial wilt or other factors caused death because the roots are usually too severely decayed. The summary therefore includes simply the number of plants available for rating, the numbers in categories 1 to 4, and the mean rating based on these categories.

The majority of cultivars and experimentals have satisfactory levels of wilt resistance. When considering support for licensing, the committee should take into account both the ratings of cultivars as well as the number of plants available for rating.

Cultivars	Total No. plants	No. plants Rating				Mean
		1	2	3	4	
WL215	66	22	24	19	1	2.16
EA21	76	46	28	2	0	1.41
EA91	66	35	20	8	3	1.53
N7-5	75	38	30	7	0	1.58
Aztec	69	38	22	7	2	1.60
Valor	73	37	25	10	1	1.65
Kodiak	74	38	35	1	0	1.50
Klondike	70	39	25	6	0	1.51
RP103	76	43	22	8	3	1.64
Nuggett	79	39	31	8	1	1.65
530	59	27	21	11	0	1.75
WL318	75	46	21	7	1	1.50
Polar-1	66	38	20	6	2	1.64
K3-11	71	29	27	15	0	1.82
Agate	72	47	20	3	2	1.46
Ramsey	73	48	23	2	0	1.37
WL311	70	44	24	1	1	1.42
131	59	23	17	13	6	2.18
K1-7	75	44	22	9	0	1.54
K1-10	71	43	20	7	1	1.53
CW5	65	27	28	5	5	1.79
Pacer	53	19	21	8	5	2.14
Saranac AR	74	44	21	8	1	1.55
Honeoye	67	42	19	6	0	1.46
Saranac	71	39	24	7	1	1.58
Saranac (Found.)	74	46	20	8	0	1.50
Vernal	60	37	17	3	3	1.53
Iroquois	58	35	18	2	3	1.62
Angus	70	51	18	1	0	1.30
Algonquin	70	37	19	11	3	1.76

C.V. - 11.74%

L.S.D. - .39

Location	Ridgetown	Guelph	Ottawa
Year seeded	1971	1972	Mean
Year harvested	1972	1973	1972
	1973	1974	Mean
	Mean	1973	1973
		1974	Mean
			southern stations

WL 309	4394	3495	5661	3236	4197	6192	5394	4492	3027	4776	5970	5018	5494	4688	6506
Saranac	4612	3924	5951	4114	4650	6691	5489	4666	2981	4957	6007	4194	5101	4863	6646
Angus	5697	4115	6551	3725	5022	5296	5420	4789	3179	4671	6190	4877	5534	4984	6859

Location	Ridgetown	Guelph	Ottawa	New Liskeard	Kapuskasing	Thunder Bay	Mean
Year seeded	1972	1973	Mean	1972	1973	Mean	Mean
Year harvested	1973	1974	1973	1973	1974	1973	Mean

Location	Ridgetown			Guelph			Ottawa			New Liskeard			Kapuskaing			Thunder Bay			Mean northern stations	Provincial Mean	
	Year seeded 1972	Year harvested 1973	Mean	Year seeded 1972	Year harvested 1973	Mean	Year seeded 1972	Year harvested 1973	Mean	Year seeded 1972	Year harvested 1973	Mean	Year seeded 1972	Year harvested 1973	Mean	Year seeded 1972	Year harvested 1973	Mean			
WL 215	9675	12742	11606	11341	6757	4852	5805	7252	8814	6380	5213	7878	6490	5982	2933	4458	6099	2759	4429	5321	7068
EA 21	9404	12976	12185	11522	7294	4917	6106	6799	8929	7021	5812	7964	6932	5891	4750	5321	6135	2344	4240	5702	7316
M7 5	9540	12860	11051	11484	6878	4945	5912	7160	8906	6700	4755	7533	6157	6570	6108	6339	5674	2773	4224	5657	7282
Vernal	9485	12663	11682	11277	6643	4568	5606	7171	8702	6184	5323	6918	6314	5579	4275	4927	5791	2595	4193	5312	7007
Algonquin	9537	13014	12228	11593	7030	5080	6055	8155	9174	6849	5076	6565	6163	5781	4237	5009	6179	3241	4710	5418	7236

Location	Ridgetown	Guelph	Ottawa	New Liskeard	Kapuskasing	Thunder Bay	Mean
Year seeded	1972	1973	Mean	1972	Mean	Mean	Mean
Year harvested	1973	1974	1973	1973	1974	1973	Mean
			southern stations				northern stations

Location	Ridgetown			Guelph			Ottawa			New Liskeard			Kapuskasing			Thunder Bay			Provincial		
Year seeded	1972	1974	1973	Mean	1972	1974	Mean	1972	Mean	1972	1974	Mean	1972	1974	Mean	1972	Mean	1974	Mean	1972	Mean
Year harvested	1973	1974	1974	Mean	1973	1974	Mean	1973	southern stations	1973	1974	Mean	1973	1974	Mean	1973	Mean	1974	southern stations	Mean	Mean
EA 91	10472	12525	12055	11684	7144	5043	6094	7024	9044	5783	4328	7636	5916	6215	3075	4645	4289	2857	3573	4883	6804
Saranac	9658	13127	12016	11600	7677	4809	6243	7059	9058	6007	4194	8044	6082	5951	4114	5033	4666	2981	3824	5137	6946
Angus	10459	13079	11661	11735	7708	4815	6262	7574	9217	6190	4877	7227	6098	6551	3725	5138	4789	3179	3984	5220	7065

RESUME ET COMMENTAIRES SUR LES ESSAIS DE VARIETES DE LUZERNE

Province de Québec

1974

<u>Essais en cours en 1974</u>		<u>Essais</u>		
<u>Site</u>	<u>Année</u>	<u>Préliminaires</u>	<u>Elimination</u>	<u>Réguliers</u>
Normandin	1972			X
	1973			X
	1974			X
La Pocatière	1974		X	
Ste-Foy	1972	X	X	
	1973	X		
	1974	X	X	
St-Hyacinthe			X	
Lennoxville	1974	X		X
St-Grégoire	1974			X
Macdonald	1972	X		
	1973	X		
	1974	X		

Tableau 1. ESSAIS PRELIMINAIRES EN RANGS
M.S. EN % DU TEMOIN (SARANAC)

	<u>St-Augustin</u> <u>2 ans</u>	<u>Ste-Foy</u> <u>1 an</u>	<u>Moyenne</u> <u>3 années-Station</u>
132 Bonus	103		
131 T7098 SX	98		
125 M. Phoenix	97		
116 Chimo(Superstan)	96	117	105
12 Iroquois	96	132	112
135 Spredor (K8-607)	95	97	96
32 Titan	93	133	111
127 EA 91	93		
110 WL 216	93		
130 MX 82 A	92		
128 Klondike	90		
79 WL 215	89		
126 EA 21	86		
111 OH16	86		
82 Weevlchek	84		
201 TX 805	84		
133 T 7438 SX	84		
122 WL 308	83		
117 MX 82	81		
132 R 7396 SX	80		
124 Magali	79		
129 America	77		
121 WL 217	77		
200 MX 45	73		
120 Durastan	72		
142 Citation(RP-103)		151	
145 M 29053		140	
140 K-37		140	
147 Vista		136	
123 Gladiator		132	
139 K1-11		125	
141 Nugget		124	
137 P-18		117	
144 Aztec		108	
146 WL 311		91	
143 Kodiak		71	
Saranac = 100 = kg/ha	5983	4709	5346

	1974		Moyennes		
	Ste-Foy 2 ans	Normandin 1 an	* 3 années-sites	** 6 années-sites	*** 5 années-sites
12 Iroquois	112.3	96.8	107.9	101.9	102.7
53 520	105.4	111.8	107.3	100.2	98.4
89 Angus	105.3				
118 Anchor	105.3				
52 Atra 55	104.5	102.6	104.0	100.4	100.1
82 Weevlehek	104.4				
61 Thor	103.8	109.9	105.6	106.1	105.5
10 Warrior	103.4				
32 Titan	101.7	106.4	103.1	99.0	97.9
42 WL 210	100.5				
18 du Puits	99.0				
43 HdY	98.2				89.7
19 WL 202	97.7				94.9
134 530	97.0				
45 DeKalb 123	93.5				
86 Algonquin	91.0				
6 Saranac = 100 = kg/g =	7738	6332	7270	7873	8181

* Ste-Foy semis 1972 et Normandin semis 1973

** Inclut les semis 1972 de Normandin, St-Grégoire et Warwick récolté en 1973 et détruit par l'hiver 1973-74.

*** Moyennes ne contiennent pas Normandin semis 1973, récolte 1974 afin de pouvoir comparer WL 202 et HdY aux autres variétés.

COMMENTAIRES

Au cours de l'hiver 1973-74 nous avons perdu des essais à St-Hyacinthe, Warwick, St-Grégoire, Lennoxville et Normandin.

Des essais d'élimination ont été établis à La Pocatière, Ste-Foy et St-Hyacinthe; des essais réguliers ont été semés à Normandin, Lennoxville et St-Grégoire. Les essais d'observations sont comme d'ordinaire au MacDonald et à Ste-Foy, mais aussi à Lennoxville.

Sur quatre sites que nous considérons, deux nous ont donné des résultats en 1974.

En deux ans, nous avons 6 années-sites de résultats qui nous permettent de faire des recommandations au C.P.V.Q. s'il y a lieu.

Les résultats au tableau 2 me permettent de recommander que la variété Thor soit ajoutée à notre liste. Nous pouvons aussi faire une recommandation au sujet de 520 qui est égale à Saranac dans son rendement. Elle est pourtant inférieure à Iroquois, mais supérieure à Titan.

Paul GERVAIS et Heinz GASSER

Luzerne pour la production du foin - 1974

(Semis 1972)

I - Renseignements généraux

- 1) Site: Station Agronomique de St-Augustin, Portneuf
- 2) Type de sol: Loam Tilly
- 3) Précédent cultural: Foin
- 4) Fumure: 6,100 Kg, chaux/ha le 10 mai 1972
560 Kg 5-20-20/ha le 12 mai 1972
560 Kg 0-20-20/ha le 24 mai 1972
450 Kg 0-15-30 + 4% B/ha le 9 juillet 1973
450 Kg 0-15-30 + 4% B/ha mai 1974
- 5) Dispositif expérimental: Méthode des blocs.
 - a) Essai d'élimination: parcelle de 1.5 X 6 mètres, 4 répétitions.
 - b) Essai d'observation: 1 rang de 6 mètres (rangs espacés d'un mètre), 2 répétitions.
- 6) Semis: Le 26 mai 1972 - 13.5 Kg/ha
- 7) Céréale-abri: Aucune
- 8) Régime d'exploitation:
1972: 2 coupes à 5 cm de hauteur
1973: 3 coupes à 5 cm de hauteur
1974: 2 coupes à 5 cm de hauteur

II - Résultats

Le tableau 1 consigne les données de l'essai d'élimination et le tableau 2 rapporte celles de l'essai d'observation.

RENDEMENTS EN KG/HA DE MATIERE SECHE 1974

No. code	VARIETES	1 ^e coupe 8/07/74	2 ^e coupe 12/08/74	Total 1974	Total 1973 3 coupes	Moyenne 1973-74
53	520	3877 a	2102 a	5,979 a	10,336 a	8,157 (2)
55	Atra 55	3816 a	2142 a	5,957 ab	10,239 a	8,098 (5)
12	Iroquois	3762 a	1976 a	5,738 abc	11,658 a	8,698 (1)
32	Titan	3762 a	1981 a	5,743 abc	10,003 a	7,873 (9)
42	WL-210	3641 a	1833 a	5,474 a-d	10,073 a	7,773 (10)
18	Anchor	3634 a	2162 a	5,796 abc	10,497 a	8,146 (4)
82	Weevlehek	3557 a	1836 a	5,393 a-d	10,765 a	8,079 (6)
89	Angus	3459 a	1934 a	5,393 a-d	10,907 a	8,150 (3)
43	HDY	3378 a	2049 a	5,427 a-d	9,777 a	7,602 (13)
51	Thor	3344 a	1870 a	5,214 a-d	10,852 a	8,033 (7)
18	Dupuits	3295 a	1798 a	5,093 a-d	10,232 a	7,662 (12)
10	Warrior	3242 a	1777 a	5,019 a-d	10,982 a	8,000 (8)
19	WL-202	3060 a	1805 a	4,865 a-d	10,249 a	7,557 (14)
34	530	3057 a	1723 a	4,780 bed	10,229 a	7,504 (15)
6	Saranac	2972 a	1740 a	4,711 cd	10,766 a	7,738 (11)
36	Algonquin	2952 a	1582 a	4,535 d	9,554 a	7,044 (17)
5	DeKalb 123	2903 a	1537 a	4,440 d	10,025 a	7,232 (16)

Moyenne	3395	1873	5268	10,420	7,844
Ecart type	±262	±145	±347	±381	

C.V. %	15.45%	15.51	13.17	7.32	
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RENDEMENTS EN KG/HA DE MATIERE SECHE 1974

No. Code	VARIETES	1 ^e coupe 08/07/74	2 ^e coupe 12/08/74	Total 1974	Total 1973	1973-74 Moyenne
136	Bonus	3751 a	1430 a	5182 a	7,092 a	6,137
131	T7098 SX	3332 a	1790 a	5122 a	6,637 a	5,879
135	Spedor (K8-607)	3223 a	1705 a	4929 a	6,493 a	4,560
12	Iroquois	2943 a	1946 a	4889 a	6,609 a	6,209
122	WL 308	3166 a	1546 a	4812 a	5,159 a	4,985
127	EA 91	3059 a	1656 a	4716 a	6,363 a	5,539
111	Ott 16	3199 a	1502 a	4701 a	5,552 a	5,126
32	Titan	3028 a	1664 a	4692 a	6,400 a	6,279
125	M. Phoenix	2864 a	1793 a	4657 a	6,974 a	5,815
116	Chimo	2971 a	1639 a	4610 a	6,922 a	5,490
6	Saranac	2727 a	1826 a	4552 a	7,415 a	4,709
130	MX 82A	2802 a	1712 a	4514 a	6,460 a	5,487
110	WL 216	2925 a	1579 a	4503 a	6,570 a	5,536
126	EA 21	2907 a	1571 a	4478 a	5,843 a	5,160
128	Klondike	2847 a	1606 a	4453 a	6,327 a	5,390
79	WL 215	2824 a	1486 a	4310 a	6,320 a	5,315
120	Durastan	2698 a	1417 a	4116 a	4,472 a	4,294
121	WL 217	2906 a	1023 a	3929 a	5,308 a	4,618
117	MX 82	2423 a	1466 a	3889 a	5,753 a	4,821
82	Weevlchek	2520 a	1363 a	3883 a	6,167 a	5,025
201	TX 805	2352 a	1457 a	3809 a	6,253 a	5,031
124	Nagali	2204 a	1436 a	3640 a	5,818 a	4,729
133	T 7438 SX	2249 a	1370 a	3619 a	6,401 a	5,010
132	T 7396 SX	2227 a	1216 a	3444 a	6,183 a	4,813
200	MX 45	1841 a	1391 a	3232 a	5,538 a	4,385
129	America	2006 a	1133 a	3140 a	6,131 a	4,635

Moyenne	2769	1532	4301	6,198	5,249
Ecart type	±372	±167	±453	±380	
C.V. %	19.01	15.49	14.88	8.68	

Paul GERVAIS et Heinz GASSER

Luzerne pour la production de foin - 1974

(Semis 1973)

I - Renseignements généraux

- 1) Site: Campus Universitaire, Ste-Foy
- 2) Type de sol: Loam schisteux St-Nicolas
- 3) Précédent cultural: Sorgho fourrager
- 4) Fumure: 6,720 Kg chaux au printemps 1973
560 Kg 5-20-20/ha le 4 juin 1973
450 Kg 0-15-30 + 4% B/ha mai 1974
- 5) Dispositif expérimental: Méthode des blocs.
 - a) Essai d'élimination: parcelle de 1.5 X 6 mètres, 4 répétitions.
 - b) Essai d'observation: 1 rang de 6 mètres (rangs espacés d'un mètre), 2 répétitions.
- 6) Semis: Le 6 juin 1973 - 13.5 Kg/ha
- 7) Céréale-abri: Aucune
- 8) Régime d'exploitation: 2 coupes à 5 cm de hauteur.

II - Résultats

Le tableau 3 consigne les données de l'essai d'observation.

* Pas de résultats pour l'essai d'élimination, les parcelles ayant subi trop de dommage de la gelée.

TABLEAU 3. Essais d'observation de Luzerne. Semis 1973

Université Laval et Agriculture Canada, Ste-Foy, P.Q.

RENDEMENTS EN KG/HA DE MATIERE SECHE, 1974

Code	VARIETES	1 ^e coupe 12/07/74	2 ^e coupe 15/08/74	1974 Total
142	Citation(RP103)	4954 a	2165 ab	7119 a
145	M29053	4402 ab	2196 a	6599 ab
140	K3-1	4426 ab	2170 ab	6596 ab
147	Vista	4246 abc	2154 ab	6400 abc
32	Titan	4332 ab	1948 abcd	6279 abc
123	Gladiator	4290 ab	1932 abcd	6222 abc
12	Iroquois	4177 abc	2032 abc	6209 abc
139	K1-11	3996 abc	1833 abcd	5889 a-d
141	Nugget	3890 abc	1958 abcd	5848 a-d
137	P-18	3547 a-d	1958 abcd	5505 a-d
116	Chimo	3600 abc	1889 abcd	5490 a-d
144	Aztec	3421 a-d	1653 cde	5074 b-e
6	Saranac	3001 bcd	1708 bcde	4709 b-e
135	K8-607	2894 bcd	1666 cde	4560 cde
146	WL-311	2738 cd	1526 de	4263 de
143	Kodiac	2052 d	1275 e	3328 e
Moyenne		3748	1883	5631
Ecart type		451	136	566
C.V. %		17.02	10.29	14.24

Paul GERVAIS et Heinz GASSER

Luzerne pour la production de foin - 1974

(Semis 1974)

I - Renseignements généraux

- 1) Site: Station agronomique St-Augustin, Portneuf.
- 2) Type de sol: Loam Tilly
- 3) Précédent cultural: 1 an de jachère
- 4) Fumure: 560 Kg de 5-20-20/ha, mai 1974
- 5) Dispositif expérimental: Méthode des blocs.
 - a) Essai d'élimination: Parcelle de 1.5 X 6 mètres, 4 répétitions
 - b) Essai d'observation: 1 rang de 6 mètres, (rangs espacés d'un mètre). 2 répétitions.
- 6) Semis: Le 4 juin 1974 - 13.5 Kg/ha
- 7) Céréale-abri: Aucune
- 8) Régime d'exploitation:
1974: 2 coupes à 5 cm de hauteur.

II - Résultats

Le tableau 4 consigne les données de l'essai d'élimination et le tableau 5 rapporte celles de l'essai d'observation.

Essais d'élimination de luzerne. Semis 1974.

Université Laval et Agriculture Canada, Ste-Foy, P.Q.

RENDEMENTS EN KG/HA DE MATIERE SECHE 1974

<i>Code</i>	<i>Variété</i>	<i>Coupe I</i> <i>15/08/74</i>
152	<i>Pacer</i>	2534 a
6	<i>Saranac</i>	2439 ab
12	<i>Iroquois</i>	2438 ab
89	<i>Angus</i>	2413 ab
118	<i>Anchor</i>	2411 ab
134	530	2402 abc
77	BW 9	2390 abc
146	WL 311	2362 bc
32	<i>Titan</i>	2346 bc
86	<i>Algonquin</i>	2320 bcd
145	<i>Valor</i>	2236 cde
138	BBWW	2177 de
82	<i>Weevlchek</i>	2174 de
149	<i>Elnar</i>	2109 e

Moyenne	2339
Ecart type	51
C. V. %	4,38

TABLEAU 5. *Essais d'observation de Luzerne, Semis 1974.*

Université Laval et Agriculture Canada, Ste-Foy, P.Q.

RENDEMENTS EN KG/HA DE MATIERE SECHE, 1974

<i>Code</i>	<i>Variétés</i>	<i>1^e coupe 15/08/74</i>
12	<i>Iroquois</i>	928
162	<i>Mélange SF</i>	919
161	<i>WL 218</i>	907
152	<i>Pacer</i>	893
160	<i>Honeoye</i>	893
141	<i>Nugget</i>	889
140	<i>K 3-7</i>	865
6	<i>Saranac</i>	864
143	<i>Kodiac</i>	854
146	<i>WL 311</i>	852
147	<i>Vista</i>	837
159	<i>Saranac AR</i>	834
125	<i>Phoenix</i>	832
137	<i>Polar</i>	832
123	<i>Gladiator</i>	827
154	<i>K1-10</i>	826
155	<i>K3-11</i>	821
144	<i>Aztec</i>	819
151	<i>G 777</i>	818
153	<i>K1-7</i>	815
139	<i>K1-11</i>	808
157	<i>M. Kabul</i>	804
142	<i>Citation (RP-103)</i>	792
158	<i>M. Sabilt</i>	782
32	<i>Titan</i>	775
163	<i>Agate</i>	766
156	<i>Vertus</i>	751
164	<i>Ramsey</i>	685
135	<i>Spredor (K8-607)</i>	684

Moyenne 827

Ecart type 55.

C.V.% 9.48

MINISTÈRE DE L'AGRICULTURE DU CANADA

FERME EXPERIMENTALE FÉDÉRALE - LA POCATIERE

M. Lucius Belzile, La Pocatière

Luzerne Elimination S-74 - R-74

- 1- Endroit: La Pocatière, Qué.
- 2- Sol: Argile Kamouraska (Bérubé)
- 3- Culture antérieure: Jachère PH 5.8
- 4- Dispositif expérimental: Méthode des blocs, 4 répétitions x 16 Var.
Parcelles, 1.50 mètres x 5 mètres
- 5- Semis: 15 mai 1974 à la volée 13 Kl/ha
15 mai 1974 inoculé
- 6- Production: foin
- 7- Herbicides: 2.4 DB ester 64, 50 onces/acre le 30 juin 1974
- 8- Fumure: 5-20-20 @ .22% - 500 lb/acre - 10 mai 1974
0-15-30 - 500 lb/acre - 14 août 1974
- 9- Récolte: 1ère coupe - 26 juillet 1974
2ème coupe - 22 octobre 1974

Hervé Pelletier

Tableau - Comportement en 1974 des variétés de luzerne semées à La Pocatière en 1974 pour la production du foin.

<u>Variétés</u>	<u>Peuplement</u>	<u>Rendements en M.S. (Kg/ha)</u>		
		<u>26-07-74</u>	<u>22-10-74</u>	<u>Total 1974</u>
Algonquin	99	2816 a	1765 bc	4580 ab
Anchor	99	2659 ab	1840 a c	4499 ab
Angus	99	2641 ab	1949 a c	4590 ab
BBW 1	99	2618 ab	1767 bc	4385 b
BW 9	99	2583 ab	1764 bc	4348 b
Elnar	99	2280 b	1256 d	3535 c
Iroquois	99	2868 a	1849 a c	4717 ab
Klondike	99	2695 a	1932 a c	4627 ab
NK 919	99	2868 a	1899 a c	4767 ab
Pacer	99	2577 ab	1788 bc	4365 b
Saranac	99	2822 a	1829 a c	4650 ab
Titan	99	2959 a	2117 a	5076 a
Valor	99	2976 a	1686 c	4663 ab
Weevlchek	99	2711 a	1954 a c	4666 ab
WL-311	99	2933 a	1686 c	4619 ab
530	99	2606 ab	2021 ab	4627 ab
M. $\pm$	99	2726 $\pm$ 120	1819 $\pm$ 98	4545 $\pm$ 174
C.V.	99	8.8	10.8	7.6

STATION DE RECHERCHES, LENNOXVILLE, QUE.

Section Phytotechnie

Essais de variétés de luzerne (Rangées d'observation)

1974

Renseignements Généraux

Site	: Station de Recherches, Lennoxville, RH2 P1
Type de sol	: Loam sableux de magog
Précédent cultural	: Lotier en 1973
Fumure	: Au semis - 458 kg/ha de 5-20-20 Au maintien - 458 kg/ha de 0-15-30 + 2% bore le 14 octobre
Dispositif expérimental	: Méthode des blocs, 3 répétitions
Parcelle	: 6 m x 90 cm
Taux de semis	: A la volée à raison de 9 kg
Régime d'exploitation	: Pour le foin, 2-3 coupes
Désherbant	: Eptan 3 chopines dans 30 gallons d'eau avant le semis
Date de semis	: 14 juin 197 <u>4</u>

Rangées d'observation de variétés de luzerne, semis 1974.

Variétés	Rendements en kg/ha M.S. 23 octobre
K1-11	1,134 a
K3-11	1,081 a
Aztec	1,064 a
K1-7	1,062 a
C7-777	1,059 a
K1-10	1,025 a
M-Phoenix	994 a
Gladiateur	990 a
Saranac	942 a
WL-311	941 a
K8-607	939 a
Nugget	905 a
K3-7	895 a
Vertus	873 a
Pacer	838 a
WL-218	825 a
Vista	788 a
Polar	788 a
Iroquois	786 a
M-Kabul	785 a
Melange SF	705 a
Kodiak	643 a
Titan	692 a
M-Salbit	686 a
RP-103	602 a
Agate	491 a
Ramsey	451 a
Moyenne	852
C.V. %	38.6

Ferme Expérimentale, Normandin, Québec

Fernand Darisse

Luzerne pour la production du foin
(Essai régulier en semis pur)

I. Informations générales:

- | | |
|------------------------------|--|
| 1 - Localité | : Champ 29 - partie 4 |
| 2 - Type de sol | : Loam argileux Normandin |
| 3 - Culture antérieure | : Jachère |
| 4 - Fumure | . |
| a) au semis | : 450 kg/ha 5-20-20 et 2% borax |
| b) de maintien | : 450 kg/ha 0-20-20 et 2% borax |
| 5 - Chaulage | : Aucun, pH 6.2 |
| 6 - Dispositif expérimental | : Méthode des blocs, 4 répétitions
Parcelles 1.5 x 6 mètres |
| 7 - Semis | |
| a) date | : 6 juin 1972, à la volée |
| b) dose | : 13.4 kg/ha |
| c) plante-abri | : Aucune |
| 8 - Herbicide | : MCPB Butyrique 64, 60 onces/a
1'année du semis |
| 9 - Exploitation | |
| a) grandeur récoltée | : 61 cm x 5 mètres |
| b) échantillonnage | : 500 g/parcelle/coupe pour la matière sèche |
| c) contribution au rendement | : Estimation visuelle |

II - Résultats: Production de matière sèche en (kg/ha) 1974. S'72

Variétés	Code	% de luzerne		27 août	Maturité	kg/ha	Moyenne 73-74
		12 juillet	27 août				
Atra-55	52	10	20	38 a	3137 a	4412	
Dekalb 123	45	5	5	34 c	2735 a	3594	
HDY	43	5	5	35 bc	2650 a	3810	
Iroquois	12	5	15	38 a	3032 a	3822	
Saranac	06	21	26	39 a	3007 a	4138	
Thor	61	26	38	39 a	3134 a	4367	
Titan	32	5	5	35 bc	2668 a	3592	
WL 202	19	5	5	35 bc	2971 a	3810	
520	53	5	15	37 ab	2903 a	3700	
Moyenne		-	-	36	2915	3916	
Ecart-type		-	-	0.81	160.12	-	
C.V. %		-	-	4.47	10.98	-	

III - Commentaires:

Ce semis a été vraisemblablement affecté par une deuxième coupe faite trois semaines après la première en 1973. Au printemps, les variétés étaient faibles, à l'exception de Thor et Saranac qui montraient une plus grande vigueur.

Une coupe a été faite, sans mesure du rendement, le 12 juillet pour réprimer les plantes adventices et normaliser le gazon. A la coupe du 27 août, la couverture végétale s'était légèrement améliorée chez 5 variétés, mais la production de matière sèche a été identique pour toutes les variétés.

La moyenne de 2 ans indique une certaine supériorité de production des variétés Atra-55, Thor et Saranac.

IV - Autres essais

Un semis comportant 11 variétés en 4 répétitions a été effectué en 1974.

Ferme Expérimentale, Normandin, Québec

Fernand Darisse

Luzerne pour la production du foin
(Essai régulier en semis pur)

I. Information générales:

- | | |
|------------------------------|---|
| 1 - Localité | : Champ 23 - partie 1 |
| 2 - Type de sol | : Loam argileux Normandin |
| 3 - Culture antérieure | : Prairie, labour et hersage d'automne |
| 4 - Fumure | |
| a) au semis | : 450 kg/ha 5-20-20 |
| b) de maintien | : 450 kg/ha 0-20-20 |
| 5 - Chaulage | : Aucun |
| 6 - Dispositif expérimental | : Méthode des blocs, 4 répétitions
Parcelles de 1.5 x 6 mètres |
| 7 - Semis | |
| a) date | : 4 juin 1973, à la volée |
| b) dose | : 13.4 kg/ha |
| c) plante-abri | : Aucune |
| 8 - Herbicide | : Gramoxone 40 on/a le 18 juillet 1973 |
| 9 - Exploitation | |
| a) grandeur récoltée | : 61 cm x 5 mètres |
| b) échantillonnage | : 500 gr/parcelle/coupe pour la matière sèche |
| c) contribution au rendement | : Estimation visuelle |

II - Résultats: Production de matière sèche en (kg/ha) 1974. S'73

Variétés	Code	8 juillet		%	16 août	Production totale 1974
		Maturité	kg/ha		kg/ha	
Atra-55	52	31 a	4025 a	76 a	2469 a	6494 ab
Iroquois	12	33 a	3607 a	70 a	2524 a	6131 b
Saranac	06	32 a	3704 a	76 a	2629 a	6332 ab
Thor	61	32 a	4223 a	70 a	2734 a	6957 ab
Titan	32	32 a	4122 a	83 a	2617 a	6739 ab
520	53	31 a	4351 a	76 a	2726 a	7077 a
Moyenne		32	4005	75	2617	6622
Ecart-type		0.74	233.94	4.70	84.55	257.20
C.V. %		4.63	11.68	12.51	6.46	7.77

III - Commentaires:

Il ne s'est manifesté aucune différence entre les variétés quant à la production de matière sèche des deux coupes. Pour la production totale cependant, 520 et Thor ont démontré un meilleur potentiel de production, surtout en comparaison avec Iroquois.

IV - Autres essais:

Un semis comportant 11 variétés en 4 répétitions a été effectué en 1974.

Atlantic Provinces Alfalfa Variety Trials - J.S. Bubar, Co-ordinator.

Alfalfa trials throughout the region were largely destroyed during the winter of 1971-72. We delayed seeding a new series of regional trials until the spring of 1973. The extremely wet conditions during the spring and summer of 1973 that were experienced throughout the region led to seeding and establishment difficulties and infestations with weeds. It was generally impractical to collect year of seeding data from these trials.

The superior performance of Rhizoma in Newfoundland on either mineral or virgin peat soil is noteworthy. Over the years, Rhizoma has stood out as the best adapted variety to Newfoundland conditions.

Other trials in the region produced little data since most varieties were not harvested in the year of seeding. One trial seeded at Truro in 1972 was discarded after two cuts. The stand was erratic, probably due to irregular winter damage and some plots were over-run by volunteer white clover.

Seed from plants that survived the severe winter of 1971-72 was distributed to:-

Cornell University
University of Guelph
Northrup King and Company
Cal/West Seeds
Weibullsholm Plant Breeding Institute

We attempted to save seed from these plants again in 1973 but weather conditions were very unsatisfactory for seed setting and a number of plants died. However, the seed that were saved will be made available to any plant breeders who request them. We hope that the distribution of this seed will result in varieties better adapted to our difficult environment.

Note: These Atlantic Provinces data failed to arrive at University Park for inclusion in the 1973 Eastern Alfalfa Improvement Conference report.

ALFALFA REGIONAL TRIALS - 1973 SEEDING PLAN

Variety	Origin	Type *	Truro	Nappan	F'ton	Ch'town	St. John's
Iroquois	Cornell	S	X	X	X	X	X
Narragansett	Cornell	S	X				
Saranac	Cornell	F	X	X	X	X	X
Angus	Ottawa	F	X			X	X
Algonquin	Ottawa	S	X	X	X		
520	Pioneer	S	X	X	X		
530	Pioneer	F	X			X	X
Americana	MLM	F	X			X	X
Klondike	MLM	S	X	X	X		
Thor	NK	F	X			X	X
K8-607 (Creeper)	NK	S	X	X	X		X
Agate	Minnesota	S	X	X	X	X	X
Titan	R.P.	S	X	X	X		
Anchor	R.P.	F	X			X	X
W.L. 215	W.L.	S	X	X	X		
Aztec	Asgrow	S	X	X	X		
Kodiak	Asgrow	S	X	X	X		
Valor	Oseco	S	X	X	X		
Maris Kabul	NSDO	F	X			X	X
Maris Phoenix	NSDO	F	X			X	X
Sabilt	NSDO	F	X			X	X
Nugget	RP	S	X				
Chimo	MLM	F	X				
WL 311	WL	F	X				
KO-2	NK	S	X				
RP 103	RP	S	X				

Also, row screening trial seeded at Kentville

S = Standard, F = Flemish

X indicates seed sent to location

ALFALFA: Seeded June 22, 1968

Data for 1973

Location: St. John's, Nfld.

Cooperator: A.F. Rayment

Soil: Cochrane gravelly clay loam

Experimental Design: randomized blocks Replicates: 3. Plots: 77" x 20'.

<u>Soil Analysis:</u>	OM	pH	N	P ₂ O ₅	K	Ca	Mg
	13.9	6.0	16	2.3	27	90	13

Preceding Crop: Timothy (1967)

Fertilization - seeding year: 2000 lb. limestone, 400 lb. 12-24-24, 24 lb. borax/ac

- maintenance (yearly): 600 lb. 5-10-30/acre in spring
150 lb. 0-0-60/acre after first cut

Pest control: Rep 1 & 2 treated with paraquat in summer of 1972 - Replicate 1 eliminated from test at that time as result of previous competition from grasses and some paraquat injury. All plots treated with Kerb that fall resulting in complete grass control and no noted injury to the crop. Dandelion now constitute a weed problem especially in plots where alfalfa is depleted.

Date of harvest: Cut 1 - July 19; Cut 2 - Sept. 4.

Variety	Dry matter yield, lbs./acre		Total
	Cut 1	Cut 2	
Rhizoma	7570 a	1710 a	9280 a
Nalfa 2	6450 ab	1420 a	7870 ab
Narragansett	5510 ab	1280 b	6790 b
Mark II	4380 bc	1550 ab	5930 bc
Saranac	2910 cd	1220 bc	4130 cd
Irduois	1960 d	860 c	2820 d

Remarks: Varieties Apex, Vernal, Nalfa 1, 522, Scout, 123 and Multileaf were eliminated for depletion of stands and almost complete take-over by dandelion. The remaining yields (hand-separated alfalfa) were extremely good despite varying degrees of dandelion contamination. Rhizoma now stands out as being by far the best. A new test of varieties was established this year. Excellent stands were obtained and plots clipped for weed control in August, but no yield data taken.

ALFALFA: Re-seeded June, 1972

Data for 1973

Location: Colinet, Nfld.Cooperator: A.F. RaymentSoil: PeatExperimental Design: Randomized blocks. Replicates: 4. Plots: 4' x 30'Soil analysis: not donePreceding crop: virgin peatFertilization - seeding year: 6000 lb. limestone/acre; 200 lb. P_2O_5 /acre
300 lb. K_2O /acre; 100 lb. F.T.E./acre-maintenance: 500 lb. 0-10-30 in springDate Harvest: one cut only, Aug. 7.

Variety	Dry matter yield lb./acre
Rhizoma	3710 a
Irdquois	2090 b
Vernal	2050 bc
Anchor	2050 bc
Saranac	2010 bcd
Apex	1830 bcd
Exp 309	1760 bcd
Thor	1690 bcd
Hdy 7	1540 bcd
WL 216	1810 bcd
WL 215	1700 bcd
WL 305	1680 bcd
WL 217	1520 bcd
Titan	1410 bcd
KO ₂	1380 bcd
520	1310 cd
530	1270 d

Remarks: At this point Rhizoma was visibly the best. Good regrowth obtained from all varieties but no second cut yield taken.

Crop: Alfalfa (Flemish cultivars), 1973

Location: Research Station, Charlottetown, P. E. I. Cooperator: W. N. Black

Soil: Charlottetown Series Exp. design: Randomized block No. of reps: 4

Size of plot: 6' x 20'

Soil analysis: $\frac{\text{O.M.}}{4.4}$ $\frac{\text{pH}}{6.3}$ $\frac{\text{N}}{\text{H}^+}$ $\frac{\text{P}_2\text{O}_5}{320 \text{ M}}$ $\frac{\text{K}_2\text{O}}{270 \text{ H}}$ $\frac{\text{Mg}}{180 \text{ M}^+}$ $\frac{\text{Ca}}{1850 \text{ M}}$

Preceding crop: Oats

Date of seeding: June 22, 1973

Rate of seeding: 12 lb/acre in drills 6" apart

Fertilization: at seeding 700 lb/acre 5-20-20 + .2B
after first cut 200 lb/acre 0-0-60

Pest control: Nil

Date of harvest: August 16, 1973 (one cut only in year of seeding)

Variety	Regrowth potential after 1st cut	Maturity	Dry matter lb/acre
1. Americana	4.00*	3% bloom	1715
2. Anchor	6.50	2% bloom	1882
3. Angus	7.00	3% bloom	1702
4. Maris Kabul	8.75	6% bloom	1559
5. Maris Phoenix	6.25	4% bloom	1401
6. Sabilt	5.25	2% bloom	1720
7. Saranac	2.50	4% bloom	1646
8. Thor	2.75	2% bloom	1649
9. 530	2.00	5% bloom	1772
LSD for varieties (P = 0.05)			238
(P = 0.01)			N.S.

* 1 - best, 9 - poorest

Remarks: Seeding was delayed in order to eliminate quack grass and other troublesome weeds by cultivation. Establishment varied as between plots, but was generally satisfactory. Early season growth was exceptionally good in Anchor and 530. By October 4th regrowth potential following 1 cutting was best in 530 followed in descending order by Saranac. Thor, and Americana with Angus and Maris Kabul showing the least regrowth potential. Failing extreme winter injury, performance data will be recorded in 1974.

Crop: Alfalfa (Standard cultivars), 1973

Location: Research Station, Charlottetown, P. E. I.

Cooperator: W. N. Black

Soil: Charlottetown Series

Exp. design: Randomized block

No. of reps: 4

Size of plot: 6' x 20'

Soil analysis: O.M. pH N P₂O₅ K₂O Mg Ca
 4.4 6.2 H+ 320M 250H 170M+ 1875M

Preceding crop: Oats

Date of seeding: June 22, 1973

Rate of seeding: 12 lb/acre in drills 6" a

Fertilization: At seeding - 700 lb/acre 5-20-20+.2B

After 1st cut - 200 lb/acre 0-0-60

Pest control: Nil

Date of harvest: August 16, 1973 (one cut only in year of seeding)

Variety	Regrowth potential after 1st cut	Maturity	Dry matter lb/acre
1. Agate	6.00*	1% bloom	1304
2. Algonquin	4.75	less than 1% bloom	1455
3. Iroquois	2.50	2% bloom	1708
4. K8-607	7.00	1% bloom	1483
5. Klondike	1.25	3% bloom	1638
6. Titan	4.25	2% bloom	1768
7. 520	2.25	2% bloom	1722
LSD for varieties (P = 0.05)			190
(P = 0.01)			260

* 1 - best, 7 - poorest

Remarks: Although seeding was delayed germination and growth were generally satisfactory. On the basis of 1 cut Titan surpassed other cultivars in early seasonal growth. In regrowth potential Titan was surpassed by Klondike, 520, and Iroquois by a rather wide margin. Winter survival and dry matter production data will be recorded in 1974.

Crop: Alfalfa (Flemish)

Location: N.S.A.C. (Area 52)

Cooperator: J.S. Bubar

Soil: Truro Sandy Loam

Exp. Design: Randomized Block

No. of Replicates: 4

Size of plot: - Seeded: 6' x 22.5'

- Harvested: 3½' x 16'

Soil Analysis:	O.M.	pH.	N	P 0 2 5	K 0 2	Mg	Ca
	8.3	6.8	54	405	170	705	4000+

Date of Soil Analysis: May 25, 1973

Preceding Crop: Wheat, Oats, Barley - Frost seeding - 1972

Date and year of seeding: May 18, 1973

Rate of Seeding: 12 lb/ac - 6" rows

Fertilization: 500 lb/ac 5-20-20 + 2B and 100 lb/ac. 0-0-60 at seeding

Pest Control: Nil

Dates of Harvest: July 10 - mowed to remove weeds
Cut #1 - August 29, 1973

Variety	Winter-kill	Maturity			Dry Matter yield, lb/acre			Total
		Cut 1	Cut 2	Cut 3	Cut 1	Cut 2	Cut 3	
Saranac, standard					1688			
Angus					1925			
530					2005			
Americana					1756			
Thor					1546			
Anchor					1678			
Maris Kabul					2061			
Maris Phoenix					1706			
Sabilt					1797			
Chimo					1995			
W.L. 311					1906			
					N.S.			

Duncan's Multiple Range Test @ P = 0.05

* Iroquois	1206
* Nanagansett	1050
* Algonquin	1330
* 520	1050

Notes

* One plot of above varieties from standard variety alfalfa trial cut to give comparison of yield to flemish varieties. Standard varieties showed much less growth in year of establishment than flemish varieties by visual appearance. Unable to harvest remaining plots

Crop: Alfalfa (screening)

Location: N.S.A.C. (Area 53-2)

Cooperator: J.S. Bubar

Soil: Truro Sandy Loam

Exp. Design: Randomized Block

No. of Replicates: 2

Size of plot: - Seeded: 2.5' x 20' (single row)

- Harvested: 2.5' x 16'

Soil Analysis:	O.M.	pH.	N	P 0 2 5	K 0 2	Mg	Ca
	11.2	7.1	62	430	156	572	4000 +

Date of Soil Analysis: May 25, 1973

Preceding Crop: Winter wheat - 1972

Date and year of seeding: May 28, 1973

Rate of Seeding: 10 lb/ac (5 gm/row)

Fertilization: 500 lb/ac 5-20-20 + 2B and 100 lb/ac 0-0-60 at seeding.

Pest Control: Nil

Dates of Harvest: Cut #1 - August 30, 1973

Variety	% Winter- kill	Maturity			Green Wt/row Recorded Yield related to Saranac = 100			
		Cut 1	Cut 2	Cut 3	Cut 1	Cut 2	Cut 3	Total
Saranac, Standard					100			
Iroquois					115			
MnP-A3 (Syn 1)					93			
MnP-B1 (Syn 2)					88			
MnP-A2 (Syn 3)					56			
K1-5					72			
K3-8					106			
K3-7					90			
K1-18					69			
P-18					32			

Green matter yield of Saranac from 32 linear feet of 30" rows
Kgs. 7.20

Dry Matter yield - lbs/acre

Saranac	1938
Iroquois	2195

Crop: Alfalfa (Screening)

Location: N.S.A.C. (Area 51-2)

Cooperator: J. S. Bubar

Soil: Truro Sandy Loam

Exp. Design: Randomized block

No. of Replicates: 2

Size of plot: - Seeded: $2\frac{1}{2}'$ x 20' -single rows

- Harvested: $2\frac{1}{2}'$ x 16'

Soil Analysis:	O.M.	pH.	N	P $\frac{0}{25}$	K $\frac{0}{2}$	Mg	Ca
	6.3	6.7	95	560	164	375	4000 +

Date of Soil Analysis: May 25, 1973

Preceding Crop: Fallowed summer of 1971; previous - hayfield (alfalfa + timothy)

Date and year of seeding: May 26, 1972

Rate of Seeding: 12 lb/ac-(6.2 gm/row)

Fertilization: 350 lb/ac 12-24-24 at seeding + Borax at 25 lb/ac.
 500 lb/ac 5-10-30 spring of each harvest year - May 8, 1973
 150 lb/ac 0-0-60 after 1st cut - July 3, 1973

Pest Control: Nil

Dates of Harvest: Cut #1 - June 22
 Cut #2 - July 20
 Cut #3 - Aug. 29

Variety	% Winter- kill	<u>Maturity</u>			Green Wt./row recorded Yield related to Saranac = 100
		Cut 1	Cut 2	Cut 3	
Saranac, Standard			100	100	100
E.A. 91			78	75	76
E.A. 21			79	71	76
K1-8			100	99	98
N7-5			114	87	100
KO-6			100	106	103
KO-3			106	89	96
KO-9			80	69	77
K1-11			99	97	98
K1-10			98	83	92
Everest			87	92	91
K1-1			110	109	113
KO-138			97	104	101
Iroquois			109	110	115
WL. 216			82	100	94
WL. 217			82	93	90
Gladiator(KO-2)			98	102	100
Exp. 309			93	96	96
KO-202			90	100	94
KO-203			104	108	109

Variety	% Winter- kill	Maturity			Green Wt./row recorded Yield related to Saranac = 100
		Cut 1	Cut 2	Cut 3	
Gemini			84	96	99
WL.308			100	101	106
N102 Brand			71	76	70
KO-8			92	101	100

Green Matter yield of Saranac from 32 linear feet of 30" rows

Kgs. = 11.10 6.80 4.90 22.80

Crop: Alfalfa

Location: N.S.A.C. (Area 51-1)

Cooperator: J. S. Bubar

Soil: Truro Sandy Loam

Exp. Design: Randomized Block

No. of Replicates: 4

Size of plot: - Seeded: 6' x 22.5'

- Harvested: 3.5' x 16'

Soil Analysis:	O.M.	pH.	N	P $\frac{0}{25}$	K $\frac{0}{2}$	Mg	Ca
	6.3	6.7	95	560	164	375	4000 +

Date of Soil Analysis: May 25, 1973

Preceding Crop: Fallowed summer of 1971; previous - hayfield (Alfalfa & Timothy)

Date and year of seeding: May 25, 1972

Rate of Seeding: 12 lb/ac (6" rows)

Fertilization: 350 lbs/ac 12-24-24 at seeding + Borax @ 25 lb/ac.
 500 lb/ac 5-10-30 spring of each harvest year - May 8, 1973
 150 lb/ac 0-0-60 after 1st. cut - July 3, 1973

Pest Control: Nil

Dates of Harvest: Cut #1 - June 20
 Cut #2 - August 2

Variety	% Winter-kill	% Stand of Alfalfa August 23, 1973	Dry Matter yield, lb/acre			Total
			Cut 1	Cut 2	Cut 3	
Saranac, standard		16	3551	902		4453
Iroquois, standard		20	3628	1244		4872
520		18	3942	1159		5101
530		16	3757	1159		4916
Anchor		20	4101	1240		5341
Thor		18	3778	1075		4853
Titan		*	3426	1472		4898
K8-607 (Creeper)		*	3934	2018		5952
Klondike		28	4138	1771		5909
Americana		8	4070	1308		5378
Chimo		10	3436	1176		4612
Warrior		13	3516	1408		4924
			N.S.	N.S.		N.S.
Duncan's Multiple Range Test @ P = 0.05						
** Vernal			4348	1952		6300
** Narragansett			3353	1575		4928
** W.L. 215			-	1847		-
** W.L. 305			-	2267		-

Notes

* Could not be estimated due to invasion by white clover.

** Average of 2 replications adjacent to trial to give some idea of yield of these varieties in comparison with the varieties in the trial.

Two replicates harvested, other 2 replicates had most alfalfa killed. Looked like ice sheet smothering damage. The replications with some survival had a slight surface slope, the killed replications were flat.

White clover invaded these plots. Certain varieties were particularly susceptible to invasion. These were Titan and K8-607 (Creeper). This white clover is included in the yield totals.

The entry Klondike appeared superior to all others in winter survival under the conditions of this trial, even in the two replications in which all other entries were almost entirely destroyed.

Alfalfa - Atlantic Provinces Region

Co-ordinator - J. S. Bubar

Reports received from:

A.F. Rayment, St. John's, Nfld. Superior winter survival put Rhizoma at top of trial in year following seeding.

E. A. Grant, Fredericton. No data due to loss of trial as a result of severe winterkill.

G. G. Smeltzer, Kentville, N.S. All entries in observation rows survived well. No appreciable differences in forage productivity.

J. E. Langille, Nappan. Little winter injury was experienced at Nappan on alfalfa in the winter of 1973-74 considering the winter-kill at some other locations. Some heaving occurred but it did not appear to kill many plants. Yields were not as high as usual due to wet and dry periods throughout the growing season. Alfalfa blotch leaf minor Agromyza frontella (Rondani) was observed at Nappan for the first time. The first outbreak was noted before the second harvest and it was observed in all alfalfa fields on the farm. The second outbreak appeared in September on regrowth following the second cut. No cultivar differences were observed.

W. N. Black, Charlottetown. Some winter injury observed in trial of Flemish cultivars. No entries appear any better than recommended cultivars Iroquois (Standard) and Saranac (Flemish).

J. S. Bubar, Truro. No differences between Flemish types in the regional trial seeded in 1973. Citation and W.L. 215 were at top of standard type trial but not significantly better than Iroquois.

A small trial including Honeoye, Saranac AR and B.W.9 in comparison with Saranac was seeded in 1974 at Truro.

ALFALFA: Seeded June 21, 1973

Data for 1974

Location: St. John's, Nfld.Cooperator: A. F. RaymentSoil: Cochrane gravelly clay loamExperimental Design: Randomized blocks Replicates: 4 Plots: 1.95 m x 6.09 mSoil Analyses: Initial pH 4.79 - May 16, 1973

Nov. 20, 1973 - OM	pH	N	P	K	Ca	Mg
13.9%	6.0	H	VL	VH	M	L

Preceding Crop: Oats

<u>Fertilization:</u>	<u>Time of application</u>	<u>Limestone</u>	<u>N</u>	<u>P₂O₅</u>	<u>K₂O</u>	<u>F.T.E.</u>
	Pre seeding, 1973	2240	22.5	90	90	9 kg/ha
	June 15, 1974	0	0	57	170	kg/ha
	Aug. 2, 1974	0	0	0	56	kg/ha

Pest Control: Nil

Winter Injury: Small portions of reps 1 and 2 were killed due to lack of snow cover. Much of the apparent kill noted in May recovered and is reported as % winter injury.

<u>Alfalfa Varieties</u>	<u>Date Cut 1</u>	<u>% Winter Injury</u>	<u>Dry matter yield, kg/ha*</u>		
			<u>Cut 1</u>	<u>Cut 2</u>	<u>Total</u>
Rhizoma	31/7	3.0 a	4374 a	1276 a	5650 a
Angus	24/7	19.0 b	4024 ab	1460 a	5485 ab
Thor	26/7	19.0 b	3025 bc	1347 a	4372 abc
Anchor	31/7	21.5 b	3057 b	1305 a	4363 abc
Maris Phoenix	24/7	17.3 b	3008 bc	1299 a	4307 abc
Americana	24/7	50.0 c	2900 bc	1296 a	4196 bc
K8-607 (Spredor)	31/7	21.5 b	3047 bc	1042 a	4089 bc
Saranac	26/7	31.8 bc	2627 c	1382 a	4010 c
Iroquois	26/7	15.8 b	2669 c	1317 a	3986 c
530	29/7	35.5 bc	2651 c	1248 a	3900 c
Sabilt	31/7	27.0 bc	2377 c	1323 a	3701 c
Maris Kabul	31/7	33.3 bc	2188 c	1303 a	3492 c
Agate	29/7	34.0 bc	2297 c	1067 a	3364 c

* Variety yields in any one column followed by the same letter are not significantly different ($p = 0.05$).

Remarks: Rhizoma is usually outyielded by such varieties as Saranac in the first year or two after seeding. Its marked hardiness in comparison to the other varieties after the severe winter has moved it to the top yield position in this first year after seeding.

Crop: Regional Alfalfa Variety Trial

Location: Nappan

Coordinator: J. E. Langille

Soil: Nappan clay loam

Experimental design: Randomized block

No. of replications: 4

Size of plot: 5' x 20'

Soil analyses: O. M. pH N P_2O_5 390 K_2O 130 Mg 550 Ca 2585
 5.9 6.8 H+ M H M+

Preceding crop: Summer fallow

Date of year of seeding: 1973

Rate of Seeding: 12 lb/ac

Fertilization: 500 lb/ac 5-10-30, May 6
 200 lb/ac Muriate of Potash, July 3

Pest control: Nil

Dates of harvest: Cut 1 - cut at bud stage
 Cut 2 - cut August 19

Variety	%	Maturity		Dry matter yield lb/ac		
	Winter kill	Cut 1	Cut 2	Cut 1	Cut 2	Total
Titan	5.0	July 1	100% bloom	3161 a	2453 a	5614 a
Iroquois	2.5	July 2	100	3109 a	2429 ab	5538 ab
Klondike	2.5	June 30	100	2996 a-c	2418 ab	5413 a-c
Saranac	5.0	July 2	100	2920 a-c	2429 ab	5349 a-d
Valor	2.5	July 3	100	2905 a-f	2396 ab	5301 a-d
Algonquin	2.5	July 2	80	2951 a-d	2273 b-c	5224 a-d
K8-607 (Spreader)	7.5	July 2	75	3081 ab	2116 d	5197 b-d
Kodiak	2.5	July 3	100	2795 b-g	2301 abc	5096 c-d
W.L. 215	2.5	July 3	100	2686 d-h	2333 ab	5019 c-e
520	15.0	July 2	100	2361 e-h	2347 ab	4978 d-e
Aztec	7.5	July 3	100	2525 g-h	2153 cd	4673 e
Agate	5.0	July 3	100	2467 h	2162 cd	4629 e

Duncan's Multiple Range Test (P = .05)

Crop: Alfalfa (standard cultivars), 1974

Location: Research Station, Charlottetown, P. E. I. Cooperator: W. N. Black

Soil: Charlottetown series Exp. design: Randomized block No. of replicates: 4

Size of plot: 6' x 20'

<u>Soil analysis</u> :	O.M.	pH	N	P ₂ O ₅	K ₂ O	Mg	Ca
(1973)	4.4	6.2	H ⁺	320M	250H	170M ⁺	1875M

Preceding crop: Oats Date of seeding: June 22, 1973

Rate of seeding: 12 lb/ac in drills 6" apart

<u>Fertilization</u> :	Early spring	450 lb/ac	5-10-30
	After first cut	350 lb/ac	0-10-30
	After second cut	500 lb/ac	5-20-20

Pest control: Nil Dates of harvest: July 4, August 22

Variety	Maturity		Dry matter yield, lb/ac			
	Cut 1	Cut 2	Cut 1	Cut 2	Total	1973-74 Av.
Iroquois	Bud to a few blooms	45% bloom	3285	1926	5211	3460
Titan	Bud to a few blooms	30% bloom	3270	1760	5030	3399
Klondike	Bud to a few blooms	45% bloom	3168	1749	4917	3278
520	Late bud to an odd bloom	40% bloom	3116	1646	4762	3242
Algonquin	Bud to a few blooms	35% bloom	2978	1510	4488	2972
K8-607 (Spredor)	Early to late bud	25% bloom	3259	1197	4456	2970
Agate	Early to late bud	25% bloom	2886	1057	3943	2624
LSD for varieties (P = 0.05)			NS	389	596	NS
(P = 0.01)			NS	529	810	NS

Remarks: Of the standard or late maturing cultivars, new introductions failed to achieve the level of D.M. production of Iroquois which significantly outyielded Algonquin, K8-607, and Agate in 1974.

Visual assessment of 11 cultivars established in regional trials in 1974 showed the incidence of common leaf spot (*Pseudopeziza medicaginis*) and resulting defoliation to be most pronounced in Aztec, Valor, 520, and Kodiak in descending order.

Eleven cultivars were seeded in regional trials in 1974. Germination in K8-607, BW9, Aztec, Honoeye and Valor was not satisfactory, resulting in rather open stands. Growth was generally satisfactory, except in Valor, B.W.9, K8-607 and Aztec which appeared to lack vigor in the establishment year. Growth vigor ratings, Oct. 15, showed Saranac, Honoeye, Klondike, Iroquois, 520, Kodiak and Algonquin, in descending order, to be superior to Aztec, K8-607, B.W. 9 and Valor.

Crop: (Flemish cultivars), 1974

Location: Research Station, Charlottetown, P. E. I.

Cooperator: W. N. Black

Soil: Charlottetown series Exp. design: Randomized block No. of replicates: 4

Size of plot: 6' x 20'

<u>Soil analysis:</u>	O.M.	pH	N	P ₂ O ₅	K ₂ O	Mg	Ca
(1973)	4.4	6.3	H ⁺	320M	270H	180M ⁺	1850M

Preceding crop: Oats

Date of seeding: June 22, 1973

Rate of seeding: 12 lb/ac in drills 6" apart

<u>Fertilization:</u>	Early spring	450 lb/ac	5-10-30
	After first cut	350 lb/ac	0-10-30
	After second cut	500 lb/ac	5-20-20

Pest control: Nil

Dates of harvest: July 4, August 22

Variety	Maturity		Dry matter yield, lb/ac			
	Cut 1	Cut 2	Cut 1	Cut 2	Total	1973-74 Av.
Saranac	Bud to early bloom	65% bloom	3572	2082	5654	3650
Sabilt	Bud to 1-3% bloom	50% bloom	3461	1998	5459	3590
530	Bud to a few blooms	60% bloom	3177	2074	5251	3512
Anchor	Bud to an odd bloom	45% bloom	3121	1926	5047	3510
Angus	Late bud	50% bloom	3049	1984	5033	3368
Thor	Late bud	55% bloom	3238	1830	5068	3358
Maris Phoenix	Bud to 1-3% bloom	65% bloom	3081	1603	4684	3042
Maris Kabul	Bud to a few blooms	60% bloom	2826	1586	4412	2986
Americana	Bud to a few blooms	55% bloom	2304	1784	4088	2902
LSD for varieties (P = 0.05)			683	NS	862	NS
(P = 0.01)			NS	NS	NS	NS

Remarks: All cultivars sustained winter injury in variable degrees, though not severe. The recommended Flemish variety Saranac continued to outyield other early maturing cultivars, significantly outyielding Americana, Maris Kabul, and Maris Phoenix. Early season growth and regrowth potential following cuttings were superior in Saranac, Sabilt and 530.

Crop: Alfalfa (Flemish)

1974 A- 6

Location: N.S.A.C., Truro, N.S.

Cooperator: J. S. Bubar

Soil: Truro Sandy Loam

Exp. Design: Randomized Block

No. of Replicates: 4

Size of Plot: - Seeded: 6' x 21.5'
- Harvested: 3.5' x 16'

Soil Analysis:	O.M.	pH.	N	P $\frac{0}{25}$	K $\frac{0}{2}$	Mg	Ca
	12.2	6.9	-	345	185	-	4000 +

Date of Soil Analysis: May 3, 1974

Preceding Crop: Cereals - Frost Seeding - 1972

Date and year of seeding: May 25, 1973 Rate of Seeding: 12 lb/ac. - 6" rows

Fertilization: 500 lb/ac. 5-20-20 + 2B, 100 lb/ac. 0-0-60 at seeding
500 lb/ac. 5-10-30 spring of each harvest year - May 9/74
150 lb/ac. 0- 0-60 after each cut

Pest Control: Nil

Dates of Harvest: Cut #1 - June 28/74
Cut #2 - Aug. 8/74
Cut #3 - Oct. 8/74 (1 cut on Aug. 29/73)

Variety	% Winter-kill	Cut 1	Dry Matter Yield, lb/acre			2- yr. Total
			Cut 2	Cut 3	Total	
Saranac (Standard)		3742	2676	1529 b-d	7946	9634
Angus		4275	2904	1534 b-d	8712	10637
530		3716	2513	1566 b-d	7795	9800
Americana		3573	2678	1657 b	7907	9663
Thor		4113	2876	1783 a	8773	10319
Anchor		4002	3024	1389 e	8415	10093
Maris Kabul		4063	2682	1536 b-d	8281	10342
Maris Phoenix		4249	2775	1577 b-d	8602	10308
Sabilt		3718	2834	1601 bc	8152	9949
Chimo		3819	2730	1515 c-e	8065	10060
W.L. 311		3843	2900	1468 de	8211	10117
		N.S.	N.S.		N.S.	

Duncan's Multiple Range Test @ P = 0.05

Crop: Alfalfa (Standard)

Location: N.S.A.C. (Area 52,53)

Cooperator: J. S. Bubar

Soil: Truro Sandy Loam

Exp. Design: Randomized Block

No. of Replicates: 4

Size of plot: - Seeded: 6' x 21.5'

- Harvested: 3.5' x 16'

Soil Analysis:	O.M.	pH.	N	P 0	K 0	Mg	Ca
	13.2	7.0	-	352 ⁵	169	-	4000+

Date of Soil Analysis: May 3, 1974

Preceding Crop: Summer Fallow in 1972; previous - hayfield (Alfalfa & Timothy)

Date and year of seeding: May 28, 1973

Rate of Seeding: 12 lb/ac. in 6" rows

Fertilization: 500 #5-20-20 + 2B and 100 lb/ac. 0-0-60 per acre at seeding
 500 #5-10-30 per acre spring of each harvest year - May 9, 1974
 150 #0-0-60 per acre after each cut

Weed Control: Nil

Dates of Harvest: Cut #1 - July 12
 Cut #2 - Aug. 27

Variety	% Winter- kill	Maturity			Dry Matter yield, lb/acre			1974 Total
		Cut 1	Cut 2	Cut 3	Cut 1	Cut 2	Cut 3	
Broquois, standard					3808	3446 ab		7254 ab
Harragansett, standard					4000	3244 bc		7244 ab
Algonquin					3794	3230 bc		7024 ab
620					3613	3306 bc		6919 b
Clondike					3635	3487 ab		7122 ab
8-607 (Spredor)					3452	2859 d		6311 c
Agate					3594	3051 cd		6645 bc
Titan					3893	3460 ab		7353 ab
V.L. 215					4201	3388 bc		7588 a
Aztec					3701	3421 ab		7122 ab
Kodiak					3759	3217 bc		6976 ab
Valor					3979	3353 bc		7332 ab
Nuggett					4030	3497 ab		7526 ab
Q-2					3726	3518 ab		7244 ab
Citation (R.P.103)					3858	3753 a		7612 a
					N.S.			

Duncan's Multiple Range Test @ P = 0.05

Crop: Alfalfa (Screening)

Location: N.S.A.C. (Area 53-2)

Cooperator: J. S. Bubar

Soil: Truro Sandy Loam

Exp. Design: Randomized Block

No. of Replicates: 2

Size of plot: - Seeded: 2.5' x 20' (single rows)

- Harvested: 2.5' x 16'

Soil Analysis:	O.M.	pH.	N	P ₂ O ₅	K ₂ O	Mg	Ca
	14.3	7.1	-	360	153	-	4000+

Date of Soil Analysis: May 3, 1974

Preceding Crop: Winter Wheat - 1972

Date and year of seeding: May 28, 1973 Rate of Seeding: 10 lb/ac. (5 gm/row)

Fertilization: 500 lb/ac. 5-20-20 + 2B and 100 lb/ac 0-0-60 at seeding
 500 lb/ac. 5-10-30 spring of each harvest year
 150 lb/ac. 0-0- 60 after each cut

Pest Control: Nil

Dates of Harvest: Cut #1 - July 2, 1974
 Cut #2 - August 13, 1974

Green Wt/row recorded
 Yield related to Saranac = 100

Variety	Cut 1	Cut 2	Total
Saranac, standard	100	100	100
Iroquois	118	98	108
MnP-A3 (Syn 1)	93	86	90
MnP-B1 (Syn 2)	82	84	83
MnP-A2 (Syn 3)	77	75	76
K1-5	75	84	80
K3-8	111	101	106
K3-7	98	101	99
K1-18	71	76	73
P-18	81	88	84

Green matter yield of Saranac from 32 linear feet of 30" rows
 Kgs. 11.2 11.1 22.3

Dry matter yield - lbs/ac.

Saranac	2825	2824	5649
Iroquois	3161	2684	5845

Crop: Alfalfa (screening)

Location: N.S.A.C. (Area 51-2)

Cooperator: J. S. Bubar

Soil: Truro Sandy Loam

Exp. Design: Randomized Block

No. of Replicates: 2

Size of plot:- Seeded: 2.5' x 20'

- Harvested: 2.5' x 16'

Soil Analysis:	O.M.	pH.	N.	P ₂ O ₅	K ₂ O	Mg	Ca
	9.2	6.8	-	455	134	-	4000+

Date of Soil Analysis: May 3, 1974

Preceding Crop: Fallowed summer of 1971; previous- hayfield (alfalfa + timothy)

Date and year of seeding: May 26, 1972 Rate of Seeding: 12 lb/ac. (6.2 gm/row)

Fertilization: 350 lb./ac 12-24-24 + 25 lb/ac. Borax at seeding

500 lb./ac 5-10-30 spring of each harvest year

150 lb./ac 0-0- 60 after 1st cut.

Pest Control: Nil

Dates of Harvest: Cut #1 - July 2, 1974

Cut #2 - Aug. 12, 1974

Variety	Green wt/row recorded		
	Yield related to Saranac = 100		
	Cut 1	Cut 2	Total
Saranac, standard	100	100	100
EA 91	71	74	73
EA 21	72	69	71
Polar 1	103	109	106
N7-5	88	88	88
KO-6	110	105	108
KO-3	85	78	82
KO-9	62	70	65
K1-11	96	87	92
K1-10	77	75	76
Everest	84	79	81
Marathon	110	119	114
KO-138	106	97	102
Iroquois	107	104	105
WL 216	101	100	100
WL 217	94	92	93
KO-2	91	85	88
Exp. 309	85	83	84
KO-202	74	80	77
KO-203	87	95	91
Gemini	91	92	91
WL 308	88	89	88
N102 Brand	56	73	64
KO-8	85	87	86

Green matter yield of Saranac from 32 linear feet of 30" rows

Kgs.	11.20	9.6	20.8
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Dry Matter Yield lbs./ac

Saranac	2899	2678	5577
Iroquois	3045	2765	5810

